

VEHICLE COMPASS SYSTEM WITH
CONTINUOUS AUTOMATIC CALIBRATION

ABSTRACT OF THE DISCLOSURE

The compass system of the present invention utilizes an improved calibration routine in
5 which a processing circuit of the compass recalibrates the compass each time three data points
are obtained from a magnetic field sensor that meet predetermined criteria. One such criterion is
that the three data points define corners of a triangle that is substantially non-obtuse. When
three data points have been obtained that define a triangle meeting this criterion, the processing
circuit calculates a center point for a circle upon which all three data points lie by solving the
10 equation $x^2 + y^2 + Ax + By + C = 0$ for A , B , and C , using the coordinate values (x,y) for the three
data points and defining the center point as $(-A/2, -B/2)$.